

REMARKS

Applicant has carefully reviewed the Official Action dated August 13, 2007 for the above identified patent application.

The Examiner's indication that Claim 15 is directed to allowable subject matter is gratefully acknowledged by Applicant. This claim has been objected to as depending from a rejected parent claim. Claim 15 has now been written in independent form to place the claim in proper form for allowance.

Claims 1 - 9 and 20 have been withdrawn from consideration as a result of a Restriction Requirement. These claims have, therefore, been cancelled from this application, without prejudice. Accordingly, Claims 10 - 19 are pending. New Claims 21 - 23 have also been added to this application, and depend from parent independent Claim 10.

No additional fee for newly added dependent Claims 21 - 23 and independent Claim 15 is enclosed. The fee for these claims is covered by the cancellation of Claims 1 - 9 and 20 which were directed to non-elected inventions.

At page 2 of the Official Action, Claim 18 has been rejected under 35 U.S.C. Section 112, first paragraph, on the grounds that the specification fails to provide details of the feature of the invention in which the rolling devices are freely movable

sideways to adapt to the width of the sheet in conjunction with the use of ball screws for adjusting the position of the rolling devices along the guides. The Official Action also states the these movements appear to be contrary to one another.

Applicant respectfully disagrees with this basis for formal rejection, and requests reconsideration. Figure 1 of the drawing clearly discloses that the rolling device 20 is movable along opposed guides 33, 34 as a result of the ball screw 36. Figure 1 additionally shows that the rolling device 20 is movable along the guides 33, 34 so as to be positioned along an edge of the metal sheet 10 (also see Figure 2 of the drawing). Accordingly, movement of the rolling device 20 along the guides 33, 34 to move the rolling device 20 adjacent to one side of the metal sheet are consistent movements, which are fully supported by the original disclosure of this patent application. See, for example, page 3, last paragraph, and page 6, last full paragraph of the original specification. Applicant respectfully submits that the original drawings, in conjunction with the original specification, fully supports Claim 18, and complies with 35 U.S.C. Section 112, first paragraph, in all respects.

It is well established that a specification is directed to persons of ordinary skill in the art, and that a specification is sufficient and satisfies the requirements under 35 U.S.C. Section 112, first paragraph, if it enables a person having ordinary skill in the relevant art to practice the claimed invention

without undue experimentation. See, for example, Wang Laboratories, Inc. v. Toshiba Corp., 26 USPQ 2d 1767 (Fed. Cir. 1993). In the instant case, both the original specification and the original drawings clearly disclose all features of Claim 18 in a manner sufficient to enable a person skilled in the relevant art to practice the apparatus defined by Claim 18 without undue experimentation. Applicant respectfully requests that the formal rejection of Claim 18 be reconsidered and withdrawn.

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At page 3 of the Official Action, Claims 10 and 11 have been rejected under 35 U.S.C. Section 102(b) as being anticipated by the Yoder patent (U.S. Patent No. 2,098,989). Claims 13 - 14, 16 - 17, and 19 have been rejected under 35 U.S.C. Section 103(a) as being obvious over the Yoder patent in view of Izumi (JP 59-27723). Claims 10 - 12 have been rejected under 35 U.S.C. Section 102(b) as being anticipated by the Utashiro patent (U.S. Patent No. 3,355,922). For the reasons to be discussed below, Applicant respectfully submits that all pending claims are in condition for allowance.

Applicant initially notes that independent Claim 10 has been amended to more clearly define the nature of the invention covered by the claim. Independent Claim 10 now recites that the device for adjusting the rolling force of the pair of rollers and the device for adjusting the angle between the axes of the pair

of rollers are adapted to thinning a part of the upstanding side of the metal sheet to result in bending of the profile of the metal sheet. These revisions to independent Claim 10 are supported by, for example, page 4, last paragraph through page 5, first full paragraph of the original specification. The apparatus disclosed in Applicant's specification and defined by independent Claim 10 includes rollers which are not used to directly bend the sheet transversely, as in a conventional roll forming device, to make a profile. Instead, the rollers are used to selectively thin parts of a roll formed profile. When an upstanding side of a metal sheet is thinned over its entire transverse section, it becomes longer and the entire profile is subject to forces that bend it transversely to the upstanding side. When the upstanding side is gradually thinned, the upstanding side bends along its transverse section since one end of the upstanding side becomes longer. By thinning one or both upstanding sides in different ways, it is possible to bend the profile in different ways, and also to twist the profile. See, for example, Applicant's specification at page 5, second full paragraph through page 6, first full paragraph.

Newly added dependent Claim 21 is directed to the feature of the invention in which means are provided for controlling the device for adjusting the rolling force of the pair of rollers during a bending operation, while newly added dependent Claim 22 is directed to the feature of the invention in which means are provided for controlling a device for adjusting the angle between

the axes of the pair of rollers during a bending operation. Newly added dependent Claim 23 claims both of the aforementioned means for controlling. These claims are supported by, for example, page 4, last paragraph, lines 10 - 12 of the original specification, which states that the adjustments can be made during a bending operation.

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Turning now to the prior art rejections raised in the Official Action, independent Claim 10 has been rejected as being anticipated by the Yoder patent and by the Utashiro et al patent. Applicant respectfully submits that both the Yoder and Utashiro patents disclose conventional roll forming devices. More specifically, in the roll forming devices disclosed in both the Yoder and Utashiro patents, the sheet is bent between rolls or rollers, but is not thinned between the rollers. As discussed above, the apparatus disclosed in Applicant's specification is defined by independent Claim 10 does not employ the rollers to bend a sheet, but on the contrary, employs the rollers only for selected portions of a roll formed profile to be thinned. As a result of the thinning of the upstanding side over its entire transverse section, it becomes longer and the entire profile is subject to forces that cause it to bend transversely to the upstanding side. By gradually thinning the upstanding side, the upstanding side bends along its transverse section because one end of the upstanding side becomes longer. By varying the manner

in which one or both upstanding sides of the metal sheet are thinned, the apparatus will bend the profile in different predetermined configurations, and will also twist the profile. On the contrary, the roll forming devices disclosed by the Yoder and Utashiro et al patents employ the rollers merely for the purpose of bending, and do not thin the sheet. Accordingly, both the structure and operation of the conventional roll forming devices disclosed by the Yoder and Utashiro patents are significantly different from the structure and operation of the bending apparatus disclosed in Applicant's specification and defined by independent Claim 10.

It is well established that a rejection of claim as being anticipated by a prior art reference requires the Patent & Trademark Office to establish a strict identity of invention between each rejected claim and a single applied prior art reference. Stated in other words, a rejection of a claim as being anticipated by a prior art reference is improper unless a single applied prior art reference discloses all features of the rejected claim, as arranged in the claim. See, for example, Connell v. Sears, Roebuck & Co., 220 USPQ 193 (Fed. Cir. 1983).


In the present case, it is clear that there is no strict identity of invention between the bending apparatus defined by pending independent Claim 10 and the conventional roll forming devices disclosed by either the Yoder or Utashiro patents. Moreover, as a result of the significant differences in structure

and operation between the bending apparatus defined by independent Claim 10 and the devices disclosed by either the Yoder or Utashiro et al patents, there is clearly no suggestion or motivation in the prior art to modify the devices disclosed by the applied patents in any manner rendering obvious the bending apparatus defined by independent Claim 10 when all positively recited features of this claim are considered in the patentability determination.

For the reasons discussed herein, Applicant respectfully submits that independent Claim 10, as amended herein, is in condition for allowance over the prior art applied to reject this claim in the Official Action. The remaining rejected dependent claims, which depend directly or indirectly from independent Claim 10 and thus include all features of this claim, are believed to be allowable, at least for the same reasons as parent independent Claim 10.

Applicant respectfully submits that all claims are in condition for allowance, and favorable action is respectfully requested.

Respectfully submitted,


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